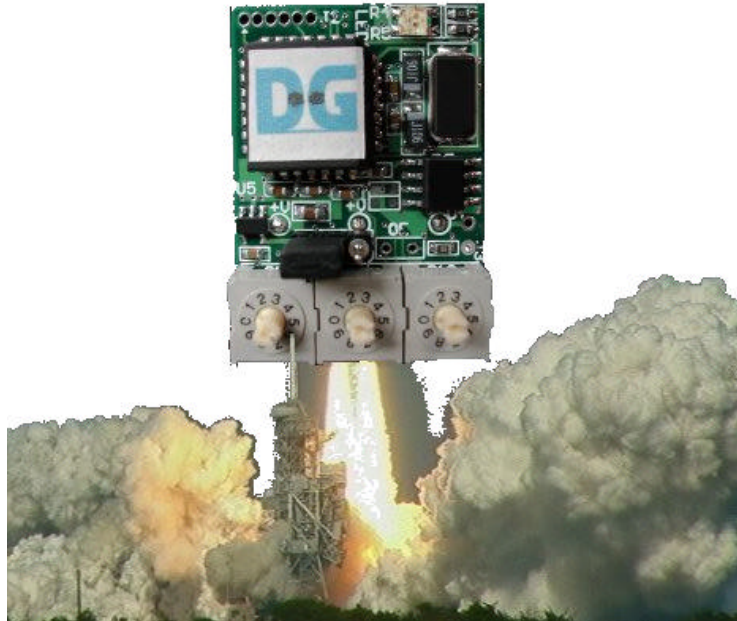# Advanced Frequency-Variable Oscillator
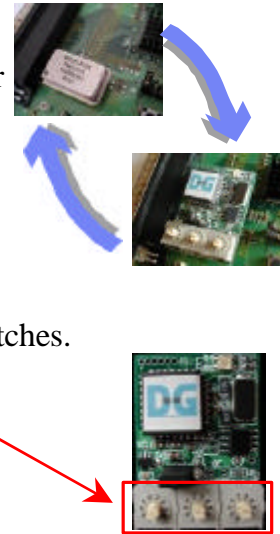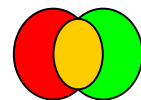# VariClock

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# Legacy Oscillators

- **Low speed**
  - Market available legacy Oscillator frequency is less than 100MHz.
  - Maximum frequency of LVTTL level output is 200MHz.

- **Fixed Frequency**
  - Another Oscillator is necessary in case of changing frequency.
  - Work delay if without stock of suitable frequency Oscillator.

- **Fixed power supply voltage**
  - 5V Oscillator and 3.3V Oscillator are different types.

# Features of VariClock

- **Pin compatible**
  - Compatible with a board pattern of legacy Oscillator
  - Directly replaceable from general Oscillator.
- **Small and Light**
  - Stamp size (L 31mm × W 23mm), 10g
- **Adjustable Frequency**
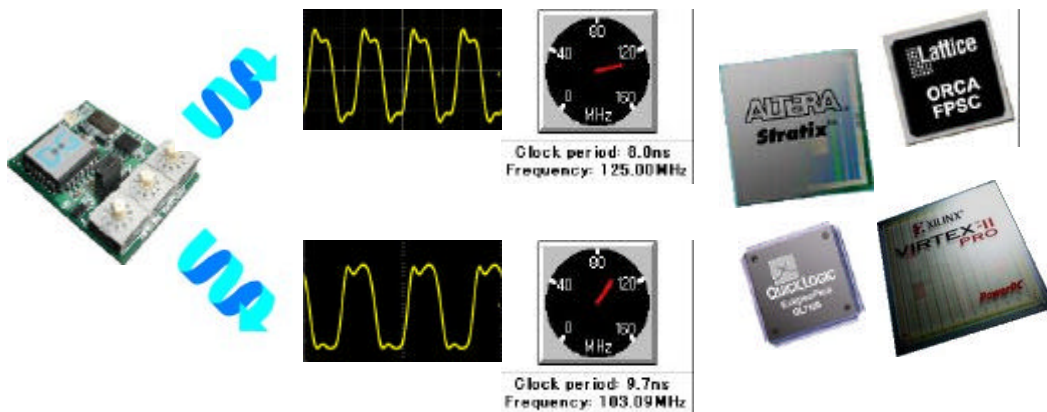  - Frequency can be directly set up by three rotary switches.

# Features of VariClock (contd.)

- **High speed**
  - Performance is guaranteed up to 250MHz, and Maximum available frequency is 400MHz (*VC250M14P)
  - Highest speed of LVTTL-level general-purpose Oscillator.
- **High resolution of frequency setting**
  - Frequency can be adjusted by every 100KHz. (*VC100M14P)
- **LED display**
  - Function state is indicated by Bi-colors LED showing Red, Green, and Yellow.
- **Supports both 5V and 3.3V power supply**
  - Apply both 5V and 3.3V power supply environment by regulator.
  - The setup of the power supply is easy by switching jumper-socket.
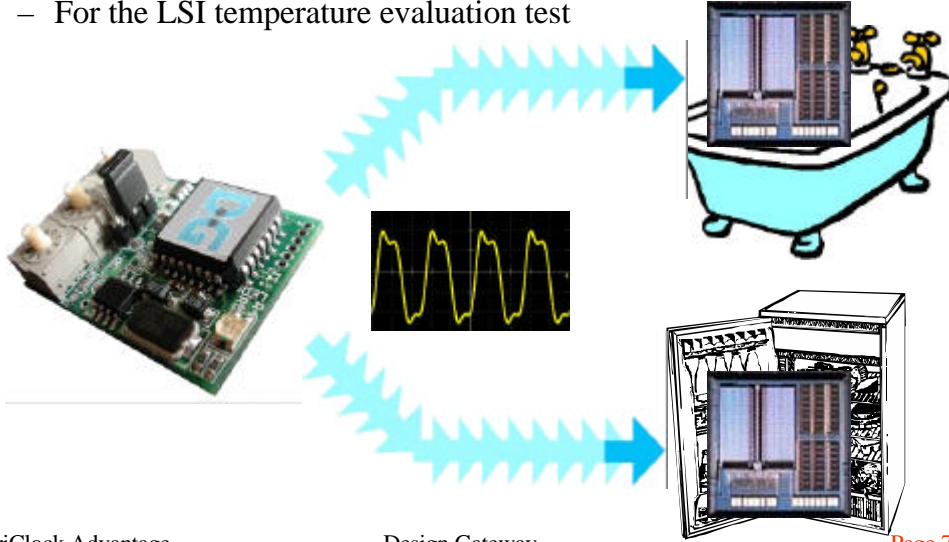
# Advantage of VariClock for users

- **The stock of general-purpose Oscillator**
  - The clock of the necessary frequency is easily supplied on hand.
  - VariClock can satisfy clock frequency adjustment required for prototype development.



Just One VariClock can adjust any value of Friquency!

# Advantage of VariClock for users (contd. 1)

- **The system clock of the digital circuit as PLD/FPGA**
  - Frequency can be adjusted to a compile result of PLD/FPGA fitting.



Clock period: 8.0ns
Frequency: 125.00MHz

Clock period: 9.7ns
Frequency: 103.09MHz

# Advantage of VariClock
## for users (contd. 2)

- **The clock for the evaluation of the LSI as ASIC/ASSP**
  - For the LSI frequency margin/limit test
  - For the LSI temperature evaluation test

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# Line up of VariClock

- **VC250M14P (high-speed model)**
  - Frequency range:　25MHz - 400MHz
    - (Maximum guarantee is 250M)
  - Frequency setting:　Every 1MHz Step

- **VC100M14P (high-resolution model)**
  - Frequency range:　25MHz - 100MHz
  - Frequency setting:　Every 100KHz Step(25 - 50MHz)
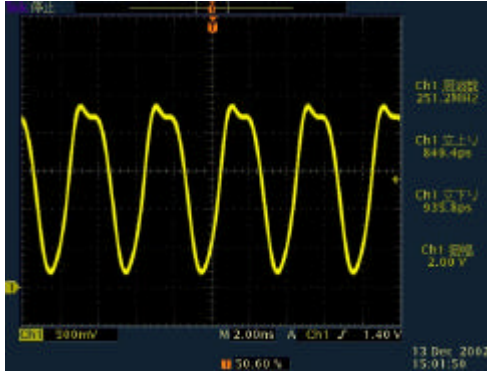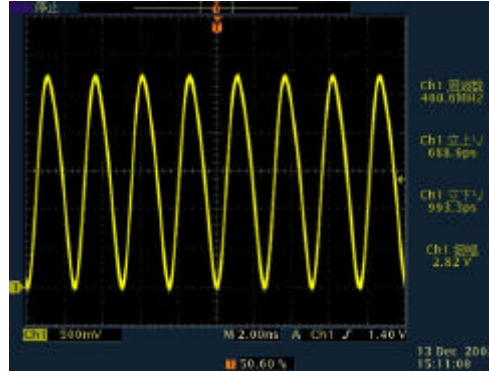    - Every 200KHz Step(50 - 100MHz)

# Measured waveform of VariClock

- **250MHz(Max guaranteed) / 400MHz(Max setting)**



250MHz (with load)



400MHz (without load)

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# For more detail

- **Detail technical data in web site.**
  - http://www.dgway.com/products/VariClock
- **Contact us**
  - Design Gateway Co., Ltd.
  - TEL: +66(2)-656-8911
  - FAX : +66(2)-656-8917
  - E-mail : sales@design-gateway.com